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Original Article

International prevalence of childbirth-related post-traumatic stress disorder: INTERSECT study

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Background

Around 140 million births occur worldwide annually. For some women, childbirth is traumatic and can lead to childbirth-related post-traumatic stress disorder (CB-PTSD), with adverse consequences for both women and their families. However, international evidence remains limited.

Aims

To estimate the international prevalence of traumatic birth and CB-PTSD.

Method

The International Survey of Childbirth-Related Trauma (INTERSECT) is a cross-sectional survey conducted in 31 countries. Women were eligible if they were 6–12 weeks postpartum, legally adults and provided informed consent. Recruitment was through routine maternity services and data were collected from April 2021 to January 2024. Outcomes were assessed using the City Birth Trauma Scale. Traumatic birth was coded using DSM-5 criteria for a traumatic stressor, and CB-PTSD classified when all PTSD criteria were met. Dissociative subtype and differential diagnoses were also assessed.

Results

A total of 11 302 women from 31 countries took part. Most participants were married, aged 30–34 years, with average household income and higher education, and 9.7% identified as being from ethnic or racial minority groups. The prevalence of traumatic birth and CB-PTSD varied across countries: traumatic birth ranged from 7 to 69% (mean 23.3, 95% CI 22.4–24.0), and CB-PTSD ranged from 1 to 36% (mean 6.7, 95% CI 3.7–9.7). CB-PTSD subtypes also varied: the dissociative subtype ranged from 1 to 24% (mean 3.8, 95% CI 2.1–5.4) and acute CB-PTSD from 0 to 7% (mean 1.3, 95% CI 0.7–1.9). Removal of participants with potential differential diagnoses did not affect prevalence rates in most countries. Many participants reported distress and impairment from symptoms, even when they did not meet CB-PTSD diagnostic criteria.

Conclusions

Results show that a notable proportion of women experience traumatic birth and CB-PTSD. The wide variation in prevalence suggests that cultural and healthcare factors unique to each country are important. Results emphasise the importance of routine trauma-informed assessment and culturally informed support in perinatal mental healthcare.

Keywords

Post-traumatic stress disorder; perinatal psychiatry; trauma- and stressor-related disorders; childbirth; birth trauma.

Pregnancy and childbirth involve significant physiological, psychological and social changes, making this a period of rapid transition. Although childbirth is often seen positively, some women experience it as psychologically traumatic and develop childbirth-related post-traumatic stress disorder (CB-PTSD). CB-PTSD refers to trauma associated with labour, birth and the immediate postpartum period. Potential childbirth-related traumas include maternal complications, infant complications[1] and maternal mistreatment (e.g. coercion[2]). Traumatic birth has been variously defined and rates vary widely, with meta-analytic estimates that 19% of women experience their birth as traumatic.[3] Some women who have a traumatic birth develop CB-PTSD, which is defined by DSM-5 as occurring when a person experiences threats of severe injury or death to themselves or significant others (in this case the infant), and has symptoms of re-experiencing the trauma, avoidance, hyperarousal and negative cognitions and mood.[4]

Prevalence of CB-PTSD

Meta-analyses estimate that 3.1 to 4.7% of women develop CB-PTSD postpartum, with 12.3% experiencing clinically significant symptoms that do not meet diagnostic criteria (or are subthreshold) but still cause distress.[5,6] As there are around 140 million births annually worldwide, even the lower bound of 3% prevalence means that over 4 million women develop CB-PTSD each year. One meta-analysis restricted to studies conducted since 2014 reported a pooled prevalence of 10%, suggesting that CB-PTSD rates may be increasing.[7] Traumatic births and CB-PTSD have a substantial negative impact on women and families. CB-PTSD is associated with depression,[8] fear of future births,[9] reduced breastfeeding,[10]

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relationship strain[11] and possibly impaired mother–infant attachment and child behaviour.[12]

Gaps in the evidence

Most research on CB-PTSD comes from high-income countries such as the UK, USA and European countries. The majority of studies from low- and middle-income countries (LMICs) have been conducted in Middle Eastern countries, with significantly higher CB-PTSD rates in those countries ($n = 14$) compared with those in Europe ($n = 35$[7]). This potentially greater prevalence in LMICs may be due to more limited maternity care, socioeconomic challenges and health inequalities. However, the use of different methodologies, measurement tools and cut-offs makes international comparisons difficult. A review of research on negative birth experiences found that risk factors differed according to country, study design and methodology employed.[13] Thus, to enable accurate cross-country comparisons, standardised methods and measures are required. Comparable data on the prevalence of traumatic birth and CB-PTSD worldwide are important in establishing the disease burden and informing maternity care policies and practice. This research therefore aimed to estimate the prevalence of traumatic birth and CB-PTSD internationally, using standardised methods.

Method

Design

The INTERSECT study is a cross-sectional study of traumatic birth and CB-PTSD in women 6–12 weeks postpartum (mean 8.5 weeks, s.d. 1.9) that aimed to examine the international prevalence, symptom presentation and associated risk factors for traumatic birth and CB-PTSD. The protocol was preregistered[14] and the survey conducted between April 2021 and January 2024 for data in this data-set (edition 1, 2024[15]). Results on the prevalence of traumatic birth and CB-PTSD are reported here. Findings on symptom presentations and risk factors are reported elsewhere.[15,16]

Participants

INTERSECT (edition 1, 2024) includes data for 11 302 participants from 31 countries: Australia, Brazil, Chile, Croatia, Cyprus, Czechia, Estonia, Germany, Iceland, Ireland, Israel, Italy, Lithuania, Malawi, Nepal, Nigeria, Norway, Pakistan, Poland, Portugal, Romania, Saudi Arabia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Arab Emirates (UAE) and the UK. Inclusion criteria were that participants: were 6–12 weeks postpartum; were legally adults in that country (i.e. aged 16 or 18 years or over); and consented to participate in INTERSECT and for their anonymised data to be part of the international data-set. Sample sizes ranged from 127 (Chile) to 1644 (Germany).

Procedures

Protocol procedures were designed to be flexible to accommodate differences in each country's context and to ensure accessibility and feasibility, particularly in LMIC settings. Consent forms and participant information sheets were translated and adapted as appropriate for each country. The survey was conducted according to the protocol,[14] although principal investigators were permitted to include additional measures relevant to their local context. The survey could also be embedded within existing projects, provided that protocol procedures were adhered to and that the larger study design did not introduce systematic bias (e.g. intervention studies). Nevertheless, core protocol elements were standardised across countries, including the INTERSECT survey questions, inclusion criteria and timing of measurement (see www.intersectstudy.org). In addition, all participants were recruited within routine maternity services attended by all pregnant or postpartum women in that country, although procedures for survey administration varied across sites.

Participants were recruited through routine maternity services (e.g. hospitals, clinics, birth centres). Participants were approached either in person, by telephone, video call or email, and provided with information about the study. Those who agreed to participate gave their written or verbal informed consent and contact details. Surveys were completed between 6 and 12 weeks postpartum on paper or online (29 countries), or by telephone (Brazil, Germany).

The INTERSECT survey was developed in English and included validated measures e.g. City Birth Trauma Scale (City BiTS[17]) and the Edinburgh Postnatal Depression Scale (EPDS[18]). The survey was administered in English in three countries (Australia, Ireland, UK) and in other languages in the remaining countries. Steps were taken to maximise the cross-cultural validity of the survey. Questionnaires were carefully chosen to prioritise those with validated translations (e.g. the EPDS is validated in over 60 languages). Where new translations were necessary, researchers followed consensus-based international guidelines.[19] Examination of measures in INTERSECT samples indicates that they had good psychometric properties.[20–22]

Primary outcomes of traumatic birth and childbirth-related PTSD were assessed using the City BiTS,[17] which consists of 29 questions that measure CB-PTSD according to DSM-5 diagnostic criteria.[4] Traumatic birth was assessed using two questions that ask about traumatic stressor characteristics according to DSM-5 criteria: (a) 'Did you believe that you or your baby would be seriously injured?' (b) 'Did you believe that you or your baby would die?'. Traumatic birth was coded as present if participants responded yes to one or both questions. This operationalisation was used to capture women's subjective perception of threat to life or serious injury during childbirth. Although it does not require or include the presence of post-traumatic symptoms, it reflects exposure to a potentially traumatic event and allows differentiation between the experience of traumatic birth and the subsequent development of CB-PTSD.

CB-PTSD was measured according to DSM-5 criteria, where symptoms were specifically related to labour, birth or events immediately after the birth. Symptoms of re-experiencing, avoidance, hyperarousal, and negative cognitions and mood, were rated for frequency over the past week (possible range 0–60). To meet DSM-5 diagnostic criteria for PTSD, participants had to report a traumatic birth according to DSM-5 criteria (see above), and a minimum of one re-experiencing symptom, one avoidance symptom, two symptoms of negative cognitions and mood and two hyperarousal symptoms at least once in the past week (i.e. a score of 1 or more). These symptoms had to have caused them distress and impairment, and to have been experienced for at least 1 month (duration criteria). The scale has good reliability and robust psychometric characteristics across translations,[20–25] and good diagnostic accuracy.[25,26] Internal consistency in this sample was high (Cronbach's $\alpha = 0{\cdot}93$).

Three subtypes of CB-PTSD were calculated:

(a) CB-PTSD with dissociative symptoms was coded when either of these dissociation items were endorsed: (i) 'feeling detached or as if you are in a dream' and (ii) 'feeling things are distorted or not real'.
(b) Potential differential diagnoses were coded if participants indicated that their symptoms could be due to medication, alcohol, drugs or physical illness (yes or maybe).

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(c) Acute CB-PTSD was coded if participants met all DSM-5 criteria for CB-PTSD except for duration criteria. This is not a diagnostic category, but might indicate delayed-onset CB-PTSD.

Demographic and obstetric information included age, ethnicity, household income, education, relationship status, immigration status, number of children, gestation, time since birth, type of birth and maternal or infant complications. Maternal and infant complications were perceived complications rated as none/minor/major. Demographic and obstetric information was collected by self-report.

Data were collected and coded in each country using a data dictionary to ensure consistency. Anonymised data from each country were uploaded to City, University of London's servers using a secure Microsoft Teams site. A data protection impact assessment was approved by City, University of London. Research governance and data-sharing contracts between host and partner institutions were in place.

Some variations to protocol arose. Obstetric information was collected from medical records in Germany, and recruitment via social media was used in addition to protocol procedures in Norway and Slovenia.

Ethical standards

Ethical approval was obtained by principal investigators in each country (see supplementary materials for a list). The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation, and with the Helsinki Declaration of 1975 as revised in 2013. All procedures involving human subjects/patients were approved by local or regional research ethics boards.

Analysis

Data from each country were cleaned and harmonised. Non-eligible cases where the survey was completed outside 6–12 weeks postpartum (or where this interval could not be exactly calculated) were removed ($n = 1025$; absolute range per country, 0–223 records; proportional range per country, 0–40%). All other records were retained, regardless of missing data in some variables, to give analysts maximum discretion in decision-making about data analyses. Some variables (age, number of children, infant date of birth) were recoded to ensure that cases were not identifiable. Once a country's data-set was fully compliant with the international data-set, the data were added to the INTERSECT (2024) data-set. Data are available via the UK Data Service.[15]

Prevalence estimates were calculated using the conditional modes from multilevel (mixed) logistic regressions, allowing the intercept to vary by the country. The intercept estimate was $\widehat{(\beta_0)} = -1.29$, with a 95% profile confidence interval of −1.55 to −1.03.[26,27] The conditional modes were calculated, which are the most likely deviations from this intercept for each country.[28,29] These were then transformed into prevalence rates by the addition of $\widehat{(\beta_0)}$ and use of the inverse logistic transformation. This procedure increases the accuracy of individual estimates by using information from the whole sample.[29] Between-country differences were evaluated graphically, showing their confidence intervals in caterpillar plots. Participants with missing data on outcome variables were excluded from analyses on a pairwise basis. Substantive analyses were conducted with SPSS version 29 for Windows (IBM Corp. Armonk, New York; https://www.ibm.com/products/spss-statistics) and R statistical software version 4.4.1 (R Foundation for Statistical Computing, Vienna, Austria; https://www.R-project.org/). The R package lme4 was used for multilevel models and for calculation of the conditional modes.[30]

Results

Sample characteristics

INTERSECT (edition 1, 2024) includes data for 11 302 participants from 31 countries. Seven of these countries were low- or middle-income countries (Brazil, Malawi, Nepal, Nigeria, Pakistan, Serbia, Turkey; $n = 3355$).

Table 1 shows the sociodemographic characteristics of samples in each country. Most participants were married, aged 30–34 years and reported average household income and higher education. Nine per cent (9.7%) of participants were from ethnic or racial minority groups, and a similar proportion (10.4%) were not living in their country of birth. However, there was substantial variation among countries. For example, the proportion of participants identifying themselves as being from ethnic or racial minorities ranged from 0 to 34.5%.

The obstetric characteristics of the samples in each country also varied (see supplementary materials). The median reported gestational age at birth was 39 weeks (range 15–46 weeks), 51.3% of participants were primiparous and 3.1% had a multiple pregnancy. Overall, 29.5% had a Caesarean (15.7% emergency, 13.8% elective), 64.3% had a vaginal birth and 6.2% had an instrumental vaginal birth. Rates varied greatly among countries, with vaginal births ranging from 26.7 to 89.3% and Caesarean from 10.4 to 67.4%. Major complications were experienced by 7.8% of women and 4.4% of their infants overall, but wide ranges were observed (major maternal complications 1.2–22.1%, major infant complications 0–18.2%).

Prevalence

Figure 1 shows the prevalence estimates for traumatic birth and CB-PTSD for the 31 different countries, ordered according to prevalence rates of traumatic birth from low to high.

Traumatic birth prevalence ranged from 7 to 69% (mean 23.3, 95% CI 22.4–24.0), with wide variation among countries (Fig. 1). The interquartile range (IQR) was 14–27%, with half of countries falling within this range. The countries with the highest prevalence of traumatic birth were Malawi (69%), Chile (49%), Nepal (41%), Saudi Arabia (40%), Spain (35%) and Turkey (35%).

CB-PTSD prevalence ranged from 1 to 36% (mean 6.7, 95% CI 3.7–9.7), with wide variability among countries; the IQR was 3–7%. Countries with the highest prevalence of CB-PTSD were Malawi (36%), Saudi Arabia (33%), Turkey (14%), Estonia (10%), Pakistan (10%) and Nepal (9%).

A scatterplot showing each country's prevalence estimates for traumatic birth and CB-PTSD is given in Fig. 2. This shows that Saudi Arabia and Malawi had particularly high rates of traumatic birth and CB-PTSD (i.e. a high birth trauma profile). Saudi Arabia is particularly noteworthy because, of the 97 respondents who reported a traumatic birth, 83 (86%) met the criteria for a diagnosis of CB-PTSD. In comparison, only 53% of those in Malawi reporting a traumatic birth met those criteria. Chile and Nepal had a high prevalence of traumatic births but fewer participants who reported a traumatic birth met criteria for CB-PTSD (17 and 22%, respectively). The UAE had a low prevalence of traumatic birth and CB-PTSD (low birth trauma profile).

Table 2 shows the prevalence rates of CB-PTSD, CB-PTSD subtypes, distress and impairment.

Distress and impairment varied significantly across countries: distress ranged from 5 to 82% (mean 44.5, 95% CI 36.5–52.6) and IQR was between 32 and 59%. Impairment ranged from 4 to 80% (mean 34.1, 95% CI 27.7–40.6) and IQR was 23–41%. These results indicate that many more women reported distress and impairment

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Table 1 Sample sociodemographic characteristics

Country	*N*	Country's income status[a]	Weeks since birth Mean (s.d.)	Age, years Mode (%)[b]	Education Mode (%)[b]	Household income Mode (%)[b]	Relationship status Mode (%)[b]	Ethnic/racial minority, %[c]	Not country of birth %[c]
Australia	166	High	8.2 (1.7)	30–34 (33.7)	Higher education (74.5)	Average (69.9)	Married (57.8)	NA	38.6
Brazil	596	Upper-middle	8.9 (2.1)	25–29 (29.5)	High school (66.6)	Average (49.5)	Cohabiting (38.4)	34.5	1.6
Chile	127	High	9.2 (1.7)	30–34 (36.2)	High school (64.8)	Below average (57.6)	Cohabiting (63.2)	NA	32.8
Croatia	380	High	7.7 (1.4)	30–34 (37.1)	Higher education (73.0)	Average (61.4)	Married (75.8)	0.3	11.1
Cyprus	142	High	7.4 (1.7)	30–34 (40.8)	Higher education (93.0)	Average (58.2)	Married (90.1)	8.5	23.9
Czechia	246	High	6.9 (1.3)	25–29 (35.8) 30–34 (35.8)	Higher education (49.8)	Average (77.0)	Married (58.0)	1.7	4.5
Estonia	285	High	8.2 (1.6)	25–29 (33.7)	Higher education (55.1)	Below average (40.7)	Cohabiting (61.1)	0.0	0.0
Germany	1644	High	10.7 (0.8)	30–34 (42.9)	Higher education (52.0)	NA	Married (48.3)	NA	8.8
Iceland	701	High	7.5 (1.5)	30–34 (32.1)	Higher education (72.6)	Average (64.5)	Married (77.1)	2.5	15.0
Ireland	274	High	7.4 (1.5)	35–39 (37.2)	Higher education (79.6)	Average (66.3)	Married (64.1)	11.4	35.8
Israel	248	High	8.5 (0.5)	30–34 (39.9)	Higher education (72.6)	Average (34.6)	Married (93.5)	6.1	13.9
Italy	211	High	7.9 (1.8)	30–34 (42.2)	Higher education (65.0)	Average (77.7)	Married (42.4)	7.1	18.0
Lithuania	328	High	7.1 (1.1)	30–34 (36.6)	Higher education (75.3)	Average (58.5)	Married (78.4)	0.6	0.9
Malawi	248	Least developed	8.5 (1.6)	20–24 (25.8) 25–29 (25.8)	Elementary (71.8)	Below average (88.7)	Married (80.2)	NA	0.4
Nepal	490	Least developed	7.6 (1.5)	25–29 (40.8)	High school (38.2)	Below average (48.4)	Married (93.5)	28.8	10.6
Nigeria	406	Lower-middle	7.8 (1.9)	25–29 (31.5)	High school (58.0)	Average (44.0)	Married (67.4)	8.6	2.2
Norway	221	High	8.4 (1.8)	30–34 (45.2)	Higher education (91.0)	Average (59.7)	Cohabiting (56.1)	3.2	6.8
Pakistan	335	Lower-middle	9.2 (1.1)	25–29 (40.9)	Higher education (37.3)	Average (58.5)	Married (100.0)	0.6	0
Poland	296	High	10.9 (0.8)	30–34 (36.5)	Higher education (73.0)	Average (64.2)	Married (70.3)	2.4	2.4
Portugal	227	High	7.7 (1.7)	35–39 (32.2)	Higher education (65.9)	Average (70.6)	Married (76.4)	1.9	15.5
Romania	135	High	7.5 (1.7)	30–34 (32.6)	Higher education (78.5)	Average (60.7)	Married (87.4)	3.0	6.7
Saudi Arabia	248	High	10.2 (1.9)	30–34 (31.9)	Higher education (67.5)	Average (70.5)	Married (99.2)	5.1	5.9
Serbia	267	Upper-middle	8.8 (1.8)	30–34 (38.6)	Higher education (68.9)	Average (65.9)	Married (93.6)	0.7	8.6
Slovakia	437	High	7.5 (1.0)	30–34 (38.9)	Higher education (58.2)	Average (83.2)	Married (65.4)	0.7	1.8
Slovenia	236	High	8.2 (1.9)	40+ (30.5)	Higher education (78.7)	Average (67.2)	Cohabiting (55.2)	2.3	3.4
Spain	254	High	8.9 (1.5)	30–34 (38.2)	Higher education (72.4)	Average (72.4)	Married (61.4)	7.5	9.1
Sweden	469	High	9.4 (1.5)	30–34 (45.0)	Higher education (80.0)	Average (54.3)	Cohabiting (57.8)	9.2	12.0
Switzerland	247	High	6.5 (1.1)	30–34 (53.0)	Higher education (70.9)	Average (68.8)	Married (59.5)	5.3	37.2
Turkey	1013	Upper-middle	7.6 (1.3)	25–29 (45.5)	Higher education (47.3)	Average (65.6)	Married (97.3)	19.7	8.7
UAE	165	High	7.6 (1.6)	30–34 (38.2)	Higher education (87.9)	Average (57.6)	Married (100.0)	14.5	27.3
UK	260	High	8.2 (1.7)	30–34 (30.8)	Higher education (73.8)	Average (56.4)	Married (57.8)	17.6	24.9
Total sample			8.5 (1.9)	30–34 (33.6)	Higher education (57.3)	Average (58.5)	Married (67.6)	9.7	10.4
Total *N*			11 302	11 302	11 058	9302	11 081	8858	11 066

NA, not available; UAE, United Arab Emirates.
a. Countries' income status according to the Official Development Assistance category used by the Development Assistance Committee of the Organisation for Economic Co-operation and Development.
b. Mode for each country and the percentage of the sample included in that modal group.
c. Percentage of each sample who were ethnic minorities or not living in their country of birth; all percentages are valid percentages (excluding missing data).

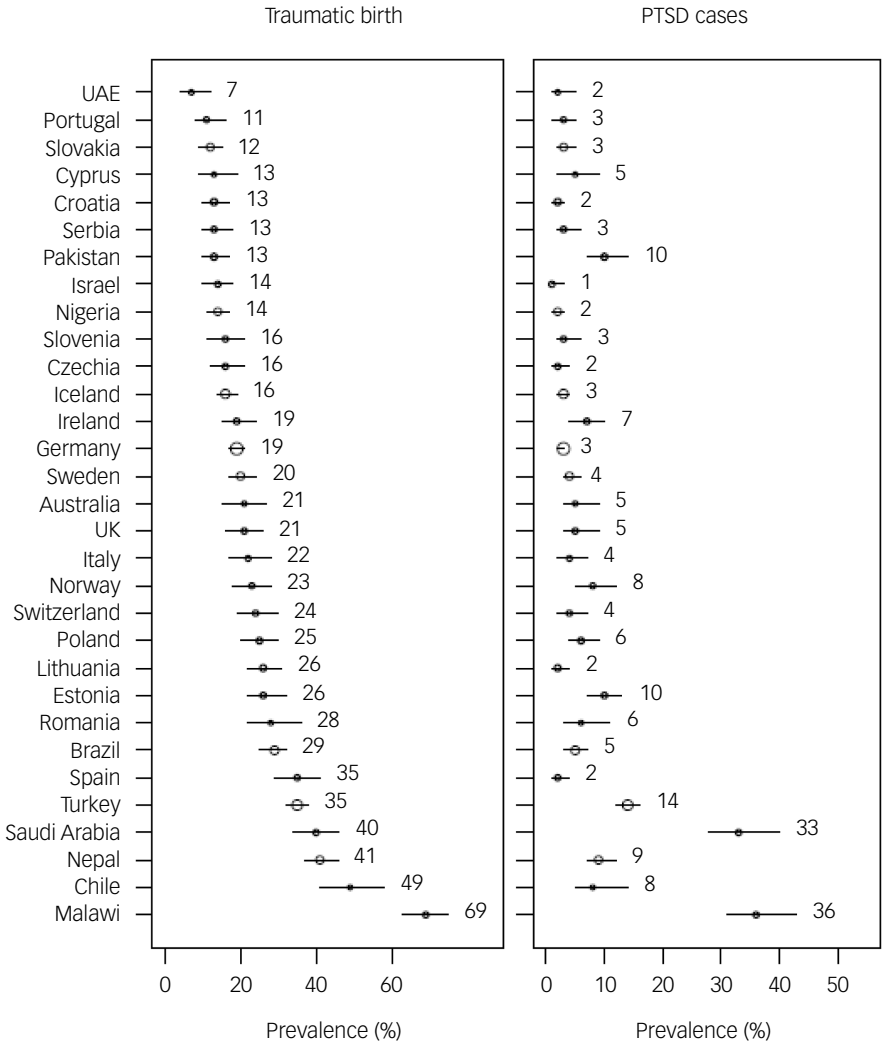

Fig. 1 Prevalence of traumatic birth and CB-PTSD in 31 different countries.

CB-PTSD, childbirth-related post-traumatic stress disorder; UAE, United Arab Emirates.

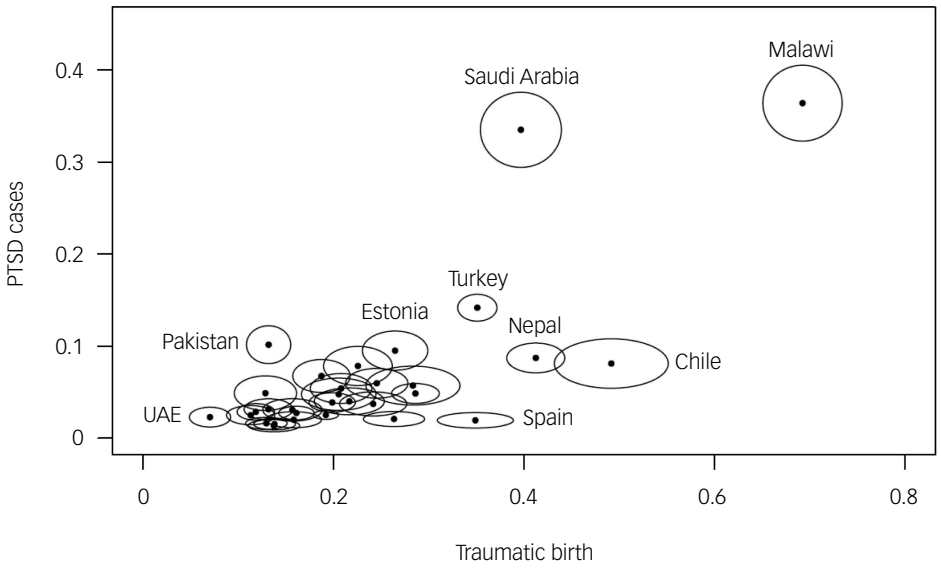

Fig. 2 Scatterplot of prevalence of traumatic birth and CB-PTSD, by country.

CB-PTSD, childbirth-related post-traumatic stress disorder; UAE, United Arab Emirates.

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Table 2 Prevalence of CB-PTSD, subtypes, distress and impairment

Country	*N*	CB-PTSD[a] Prev. (95% CI)	CB-PTSD dissociative subtype[a] Prev. (95% CI)	Acute CB-PTSD[a] Prev. (95% CI)	CB-PTSD excluding differential diagnoses Prev. (95% CI)	Distress[a] Prev. (95% CI)	Impairment[a] Prev. (95% CI)
Australia	166	5 (3, 7)	3 (2, 5)	2 (1, 5)	4 (3, 7)	43 (38, 49)	33 (29, 39)
Brazil	596	5 (4, 6)	3 (2, 4)	1 (0, 1)	5 (4, 6)	54 (51, 58)	42 (39, 46)
Chile	127	8 (5, 12)	4 (2, 6)	1 (0, 2)	8 (5, 12)	44 (38, 51)	39 (34, 45)
Croatia	380	2 (1, 3)	1 (1, 2)	0 (0, 1)	2 (1, 3)	20 (18, 24)	16 (13, 18)
Cyprus	142	5 (3, 8)	3 (2, 6)	1 (0, 3)	5 (3, 8)	51 (45, 57)	36 (30, 42)
Czechia	246	2 (1, 4)	1 (1, 2)	0 (0, 1)	2 (1, 3)	13 (10, 16)	13 (10, 17)
Estonia	285	10 (7, 12)	5 (4, 7)	1 (0, 2)	9 (7, 11)	57 (53, 61)	45 (41, 49)
Germany	1644	3 (2, 3)	1 (1, 2)	0 (0, 0)	2 (2, 3)	47 (45, 48)	29 (27, 30)
Iceland	701	3 (2, 4)	2 (1, 3)	1 (0, 1)	2 (2, 3)	65 (61, 68)	52 (49, 56)
Ireland	274	7 (5, 9)	4 (3, 6)	1 (0, 2)	6 (5, 9)	37 (33, 41)	27 (23, 30)
Israel	248	1 (1, 3)	1 (1, 3)	1 (1, 2)	1 (1, 3)	5 (3, 8)	9 (7, 12)
Italy	211	4 (3, 6)	3 (2, 5)	1 (0, 2)	4 (2, 6)	64 (58, 70)	35 (29, 41)
Lithuania	328	2 (1, 3)	2 (1, 3)	2 (1, 3)	2 (1, 3)	31 (28, 35)	22 (19, 26)
Malawi	248	36 (32, 41)	1 (0, 1)	1 (1, 2)	36 (32, 41)	70 (66, 74)	61 (56, 65)
Nepal	490	9 (7, 11)	7 (6, 9)	7 (6, 9)	4 (3, 5)	34 (31, 37)	27 (24, 30)
Nigeria	406	2 (1, 3)	1 (0, 2)	0 (0, 1)	1 (1, 2)	8 (6, 10)	4 (3, 5)
Norway	221	8 (6, 11)	6 (4, 8)	2 (1, 4)	7 (5, 10)	79 (74, 83)	43 (38, 49)
Pakistan	335	10 (8, 13)	9 (7, 12)	1 (1, 2)	2 (1, 4)	82 (79, 85)	80 (77, 83)
Poland	296	6 (4, 8)	4 (2, 5)	1 (0, 2)	6 (4, 8)	44 (39, 49)	33 (29, 38)
Portugal	227	3 (1, 4)	1 (1, 2)	1 (0, 1)	2 (1, 4)	61 (55, 67)	35 (29, 40)
Romania	135	6 (4, 9)	4 (2, 7)	0 (0, 1)	4 (3, 7)	32 (27, 38)	26 (21, 32)
Saudi Arabia	248	33 (29, 38)	24 (20, 28)	1 (0, 1)	29 (25, 33)	72 (68, 76)	69 (65, 73)
Serbia	267	3 (2, 5)	1 (0, 2)	0 (0, 1)	3 (2, 5)	15 (12, 18)	11 (09, 14)
Slovakia	437	3 (2, 4)	1 (1, 2)	1 (1, 2)	3 (2, 4)	36 (33, 39)	24 (21, 27)
Slovenia	236	3 (2, 5)	2 (1, 4)	2 (1, 3)	3 (2, 5)	29 (25, 33)	22 (19, 26)
Spain	254	2 (1, 3)	1 (1, 3)	2 (1, 4)	1 (0, 2)	34 (30, 38)	40 (35, 44)
Sweden	469	4 (3, 5)	3 (2, 4)	0 (0, 1)	4 (3, 5)	50 (46, 54)	33 (30, 37)
Switzerland	247	4 (2, 6)	2 (1, 4)	0 (0, 1)	4 (2, 6)	29 (25, 34)	20 (16, 24)
Turkey	1013	14 (13, 16)	11 (10, 12)	6 (5, 8)	12 (11, 14)	41 (39, 43)	37 (35, 39)
UAE	165	2 (1, 4)	1 (0, 3)	1 (1, 3)	2 (1, 4)	NA	NA
UK	260	5 (4, 8)	4 (3, 6)	1 (1, 2)	5 (4, 8)	40 (36, 45)	32 (28, 36)
IQR		3–7	1–4	0–1	2–6	32–59	0.3–41
β (95% CI)	11 302	−3.05 (−3.43, −2.69)	−3.69 (−4.11, −3.31)	−4.89 (−5.47, −4.42)	−3.23 (−3.62, −2.86)	−0.27 (−0.70, 0.16)	−0.77 (−1.12, −0.43)
σ (95% CI)		0.95 (0.74, 1.28)	0.99 (0.75, 1.37)	1.14 (0.80, 1.69)	0.97 (0.74, 1.32)	1.15 (0.89, 1.55)	0.93 (0.73, 1.23)

CB-PTSD, childbirth-related post-traumatic stress disorder; UAE, United Arab Emirates; NA, not available; IQR, interquartile range.
a. These variables include participants who met the criteria for a possible differential diagnosis.
The intercept estimates and their standard deviations are shown at the bottom of the table, with their 95% confidence intervals. The intervals for the standard deviations show that there is considerable variation by country.

than those who met the criteria for a diagnosis of CB-PTSD, suggesting that subclinical symptoms also cause distress and impairment.

CB-PTSD dissociative subtype prevalence ranged from 1 to 24% (mean 3.8, 95% CI 2.1–5.4), and IQR was 1–4%. The prevalence of CB-PTSD dissociative subtype was over half that of CB-PTSD in many countries, suggesting that a large proportion of CB-PTSD includes dissociative symptoms. A notable exception to this is Malawi, where the CB-PTSD dissociative subtype was rare.

Acute CB-PTSD prevalence was near zero for most countries, with the exceptions of Nepal (7%) and Turkey (6%); IQR was 0–1%.

Differential diagnoses were not common. Table 2 shows that removal of participants with a possible differential diagnoses did not greatly affect prevalence rates in most countries, with the exception of Nepal (prevalence decreased from 9 to 4%), Pakistan (decreased from 10 to 2%), Saudi Arabia (decreased from 33 to 29%) and, to a lesser extent, Turkey (decreased from 14 to 12%).

Discussion

The INTERSECT study provides the first large-scale international estimates of traumatic birth and CB-PTSD, including CB-PTSD subtypes and differential diagnoses using standardised methods, across 31 countries. The mean prevalence of CB-PTSD was 6.7%, with half of countries reporting a prevalence between 3 and 7% (IQR); this is broadly consistent with meta-analytic estimates of 3.1–4.7%.[5,6] The mean prevalence of traumatic birth was 23.3%, with half of countries having a prevalence between 14 and 27%. These results reveal significant variation among countries, with high trauma rates in Malawi and Saudi Arabia and low rates in Croatia, Czechia, Israel, Nigeria and UAE, suggesting that unique sociodemographic, cultural and healthcare factors in each country influence rates of birth trauma and CB-PTSD. The study was conducted during the COVID-19 pandemic when varying restrictions were imposed on maternity care, so this may also have contributed to variation in prevalence rates. The wide confidence intervals observed for several estimates indicate a degree of uncertainty, and these findings should therefore be interpreted with caution, particularly when comparing prevalence rates across countries.

The results show that a substantial proportion of postpartum women experience clinically significant trauma symptoms, many of whom do not meet full diagnostic criteria. Rates of distress and impairment were high in this sample, at 44.5 and 34.1%, respectively; this is greater than meta-analytic estimates of subclinical symptoms, at 12.3%.[5,6] This difference probably reflects variation in how subclinical symptoms are defined and measured, and suggests that previous research may have underestimated the burden of subclinical CB-PTSD symptoms. This highlights the need for consensus around how subclinical CB-PTSD is defined and operationalised, as well as the importance of assessing distress and impairment alongside symptoms in both research and routine postpartum care.

Another unique aspect of this study is the investigation of CB-PTSD subtypes and differential diagnoses. The results showed that, in many countries, prevalence of the CB-PTSD dissociative subtype was over half that of CB-PTSD, suggesting that many cases of CB-PTSD include symptoms of dissociation. Acute CB-PTSD, where women did not meet the DSM-5 duration criterion, was rare but findings suggest that there is a small subset of women who might develop full CB-PTSD over time. Excluding participants with possible differential diagnoses of physical illness, medication or substance use did not significantly alter prevalence rates in most countries. This supports the validity of prevalence estimates from previous research that did not assess or account for differential diagnoses. However, removing those with differential diagnoses did affect prevalence rates in a few countries, highlighting potential regional factors that warrant further investigation, such as greater exposure to health-related complications or cultural differences in disclosure and stigma. This study did not include other psychiatric disorders as differential diagnoses, so this requires further examination.

Importantly, many women reported that their CB-PTSD symptoms had caused them significant distress (32–56%) and impairment (23–40%) despite not meeting the diagnostic criteria for CB-PTSD, emphasising the need to include women with non-diagnostic symptoms in screening and treatment. We need to be mindful that non-diagnostic symptoms can still cause distress and impact on a person's daily functioning. Providing support and treatment for all women with CB-PTSD, including those with non-diagnostic symptoms, is therefore important.

Study limitations

This was an ambitious study with notable strengths, including the international scope and the use of a standard protocol and outcome measure that assessed CB-PTSD according to DSM-5 criteria. Limitations include reliance on self-reported questionnaire data, although evidence suggests that maternal recall of birth events is highly accurate.[31] Because the questionnaires were developed in English, they required translation and may be less apt in non-Western cultures. Diagnostic interviews are the gold standard for assessment of psychiatric disorders, but resource constraints precluded the use of diagnostic interviews, particularly in low-income countries. The geographical sampling frames also varied, and the time frame coincided with the COVID-19 pandemic in some countries, and thus a country's data are not necessarily representative of that country at the national level. The study relied on participants agreeing to take part, and response rates were not recorded in all countries so are unknown; therefore some selection bias is likely, reducing the generalisability of findings. In addition, variation in recruitment procedures and survey administration across sites may have further contributed to heterogeneity in the sample, and should be considered when interpreting cross-country comparisons.

These limitations partly reflect the need to balance standardised protocol procedures with adaptations required for implementation across multiple countries, particularly in ensuring the research was feasible and accessible to LMICs. Similarly, the nomothetic approach used to provide comparable data across countries necessarily precludes ideographic, culturally grounded approaches. Both nomothetic and ideographic approaches have strengths, and results can be triangulated to improve understanding. Finally, participants from LMICs comprised just under a third of the total sample and so were still underrepresented in the INTERSECT data-set (edition 1, 2024). Thus, further adequately resourced research is needed in order that national sampling frames and diagnostic interviews can be used to increase representativeness and accuracy across all countries. Future research may benefit from targeted follow-up in countries showing atypical prevalence patterns, in order to better understand potential contextual and methodological influences.

By providing a large, multinational sample, this study offers valuable estimates of international prevalence that can be used to inform future developments in perinatal mental health and maternity care. The prevalence of traumatic birth and CB-PTSD across multiple countries illustrates the substantial disease burden that is likely, especially given previous evidence on the negative

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impact of CB-PTSD on women and families.[8–12] Variations in CB-PTSD rates suggest the influence of unique sociodemographic, cultural and healthcare factors that may require targeted interventions; further research on contextual factors is therefore warranted. Learning from countries with low trauma rates can be used to help improve care and reduce trauma in those countries with higher rates. This includes strategies to prevent CB-PTSD, screening programmes to identify at-risk women, referral pathways and the provision of effective treatment. For example, results underscore the importance of routine, trauma-informed assessment following childbirth and the need for flexible, culturally informed approaches to identification and support in perinatal mental healthcare. The findings can also inform global initiatives, such as the United Nations maternal health goals[32] and World Health Organization campaigns to reduce disrespect and abuse during childbirth[33] and enhance childbirth experiences,[34] supporting better maternal mental health worldwide. In addition, the high prevalence of dissociative symptoms among women with CB-PTSD, together with the substantial distress and functional impairment observed in those with subthreshold symptoms, highlight the need for clinical assessment and support that extends beyond categorical diagnosis. Finally, the open-access INTERSECT data-set[15] provides a valuable resource for further research into factors influencing traumatic birth and CB-PTSD worldwide, helping to inform intervention on an international scale.

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Supplementary material

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Data availability

Data and supporting documentation for the INTERSECT study (2024) are available through the UK Data Service (SN: 9295, doi: http://doi.org/10.5255/UKDA-SN-9295-1, URL: https://beta.ukdataservice.ac.uk/datacatalogue/studies/study?id=9295).

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Authors are all part of the INTERSECT Consortium. The INTERSECT study was conceptualised, designed and managed by S.A., J.E.H., R.W., G.C. and G.L. Data were managed and linked by C.G. and statistical analyses conducted by D.B.W. All other authors conducted and managed the INTERSECT survey in their respective countries and were thus involved in data curation, investigation, project administration, resources, supervision and validation. The manuscript was drafted by S.A. and reviewed by all authors. D.B.W. and S.A. had full access to all data in the study, and take responsibility for their integrity and the accuracy of data analysis.

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Declaration of interest

None.

References

1 Handelzalts J, Ayers S, Webb R, Constantinou G, Lucas G, Grollman C et al. Cross-national risk factors for childbirth-related PTSD: findings from the INTERSECT study. *Psychol Med* 2025; **55**: e349.

2 Silva-Fernandez CS, de la Calle M, Arribas SM, Garrosa E, Ramiro-Cortijo D. Factors associated with obstetric violence implicated in the development of postpartum depression and post-traumatic stress disorder: a systematic review. *Nurs Rep* 2023; **13**: 1553–76.

3 Xu Y, Wang W, Zhou L, Xu W, Wang H, Zhang F, et al. Systematic review and meta-analysis of prevalence and risk factors for psychological birth trauma. *Nurs Res* 2025; **74**: 123–9.

4 American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders 5th ed*. American Psychiatric Association, 2022.

5 Yildiz PD, Ayers S, Phillips L. The prevalence of posttraumatic stress disorder in pregnancy and after birth: a systematic review and meta-analysis. *J Affect Disord* 2017; **208**: 634–45.

6 Heyne C-S, Kazmierczak M, Souday R, Horesh D, Lambregtse-van den Berg M, Weigl T, et al. Prevalence and risk factors of birth-related posttraumatic stress among parents: a comparative systematic review and meta-analysis. *Clin Psychol Rev* 2022; **94**: 102157.

7 Osório FL, Borges MM. Posttraumatic stress disorder prevalence and childbirth: update meta-analysis after the introduction of the DSM-5 and COVID-19 pandemic. *Arch Womens Ment Health* 2024; **27**: 337–57.

8 Dikmen-Yildiz P, Ayers S. PTSD and comorbidity in perinatal women in Turkey: a longitudinal population-based study. *Midwifery* 2017; **55**: 29–37.

9 Dencker A, Nilsson C, Begley C, Jangsten E, Mollberg M, Patel H, et al. Causes and outcomes in studies of fear of childbirth: a systematic review. *Women Birth* 2019; **32**: 99–111.

10 Garthus-Niegel S, Horsch A, Ayers S, Junge-Hoffmeister J, Weidner K, Eberhard-Gran M. The influence of postpartum PTSD on breastfeeding: a longitudinal population-based study. *Birth* 2018; **45**: 193–201.

11 Delicate A, Ayers S, Easter A, McMullen S. The impact of childbirth-related post-traumatic stress on a couple's relationship: a systematic review and meta-synthesis. *J Reprod Infant Psychol* 2018; **36**: 102–15.

12 Van Sieleghem S, Danckaerts M, Rieken R, Okkerse JME, de Jonge E, Bramer WM, et al. Childbirth related PTSD and its association with infant outcome: a systematic review. *Early Hum Dev* 2022; **174**: 105667.

13 Chabbert M, Panagiotou D, Wendland J. Predictive factors of womens subjective perception of childbirth experience: a systematic review of the literature. *J Reprod Infant Psychol* 2021; **39**: 43–66.

14 Ayers S, Handelzalts J, Webb R, Lucas G, Constantinou G, et al. *International Survey of Childbirth-related Trauma (INTERSECT)*. Research Registry, 2021 (https://www.researchregistry.com/browse-the-registry#home/registrationdetails/5ffc7453702012001b80a58c/).

15 Ayers S, Handelzalts J, INTERSECT Consortium. *INTERSECT: International Survey of Childbirth-Related Trauma, 2021–2024* [SN: 9295]. UK Data Service, 2024 (https://datacatalogue.ukdataservice.ac.uk/studies/study/9295#documentation).

16 Constantinou G, Ayers S, Webb R, Handelzalts J, Wright DB, Grollman C, et al. Symptom presentation of childbirth-related post-traumatic stress in 31 countries: the INTERSECT study. *J Affective Disorders* 2026; **412**: 122092.

17 Ayers S, Wright DB, Thornton A. Development of a measure of postpartum PTSD: the City Birth Trauma Scale. *Front Psychiatry* 2018; **9**: 409.

18 Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *Br J Psychiatry* 1987; **150**: 782–6.

19 Wild D, Grove A, Martin M, Eremenco S, McElroy S, Verjee-Lorenz A, et al. Principles of good practice for the translation and cultural adaptation process for Patient-Reported Outcomes (PRO) measures: report of the ISPOR Task Force for Translation and Cultural Adaptation. *Value Health* 2005; **8**: 94–104.

20 Škodová Z, Ďuríčeková B, Bánovčinová L, Urbanová E, Bašková M, Grendár M. Factor structure and psychometric characteristics of the City Birth Trauma Scale- Slovak version. *Sex Reprod Healthc* 2025; **43**: 101063.

21 Sigurðardóttir VL, Lýðsdóttir LB, Swift EM. Traumatic birth experience and posttraumatic stress disorder: the psychometric properties of the Icelandic version of the City Birth Trauma Scale (City BiTS). *Sex Reprod Healthc* 2025; **45**: 101124.

22 Ciuffo G, Ionio C, Epifania OM, Landoni M, Bianchi S, Webb, R, et al. Validation of the City Birth Trauma Scale in Italian: addressing childbirth-related post-traumatic stress disorder. *J Reprod Infant Psychol* 2025: 1–19. Available from: https://doi.org/10.1080/02646838.2025.2546969.

https://doi.org/10.1192/bjp.2026.10708 Published online by Cambridge University Press

23 Nakić Radoš S, Matijaš M, Kuhar L, Anđelinović M, Ayers S. Measuring and conceptualizing PTSD following childbirth: validation of the City Birth Trauma Scale. *Psychol Trauma* 2020; **12**: 147–55.

24 Sandoz V, Hingray C, Stuijfzand S, Lacroix A, El Hage W, Horsch A. Measurement and conceptualization of maternal PTSD following childbirth: psychometric properties of the City Birth Trauma Scale-French Version (City BiTS-F). *Psychol Trauma* 2022; **14**: 696–704.

25 Osorio FDL, Darwin ACR, Bombonett EA, Ayers S. Posttraumatic stress following childbirth: psychometric properties of the Brazilian version of the City Birth Trauma Scale. *J Psychosom Obstet Gynaecol* 2022; **43**: 374–83.

26 Grundström H, Östergötland R. *Identifying Birth-related PTSD: Cutoffs For the City Birth Trauma Scale. Study no. NCT07159516*. Clinical Trials.gov, 2025 (https://clinicaltrials.gov/study/NCT07159516).

27 Goldstein H. *Multilevel Statistical Models* 4th ed. Wiley, 2011.

28 Wright DB, London K. Multilevel modelling: beyond the basic applications. *Br J Math Stat Psychol* 2009; **62**: 439–56.

29 Efron B, Morris C. Steins paradox in statistics. *Sci Am* 1977; **236**: 119–27.

30 Bates D, Mächler M, Bolker B, Walker S. Fitting linear mixed-effects models using lme4. *J Stat Softw* 2015; **67**: 1–48.

31 Stuart JJ, Skurnik G, Roche AT, Tsigas E, Rich-Edwards JW, Seely EW. Accuracy of maternal self-report of recent preeclampsia among healthy women. *J Womens Health (Larchmt)* 2024; **33**: 1072–9.

32 United Nations. *Millenium Development Goal 5: Improve Maternal Health*. United Nations, n.d. (https://www.un.org/millenniumgoals/maternal.shtml).

33 World Health Organization. *The Prevention and Elimination of Disrespect and Abuse During Facility-Based Childbirth*. World Health Organization, 2015 (https://apps.who.int/iris/bitstream/handle/10665/134588/WHO_RHR_14.23_eng.pdf).

34 World Health Organization. *WHO Recommendations: Intrapartum Care for a Positive Childbirth Experience*. World Health Organization, 2018 (https://www.who.int/publications/i/item/9789241550215).

https://doi.org/10.1192/bjp.2026.10708 Published online by Cambridge University Press